Exhibit 30

VoLTE Service Description and Implementation Guidelines

Version 1.1

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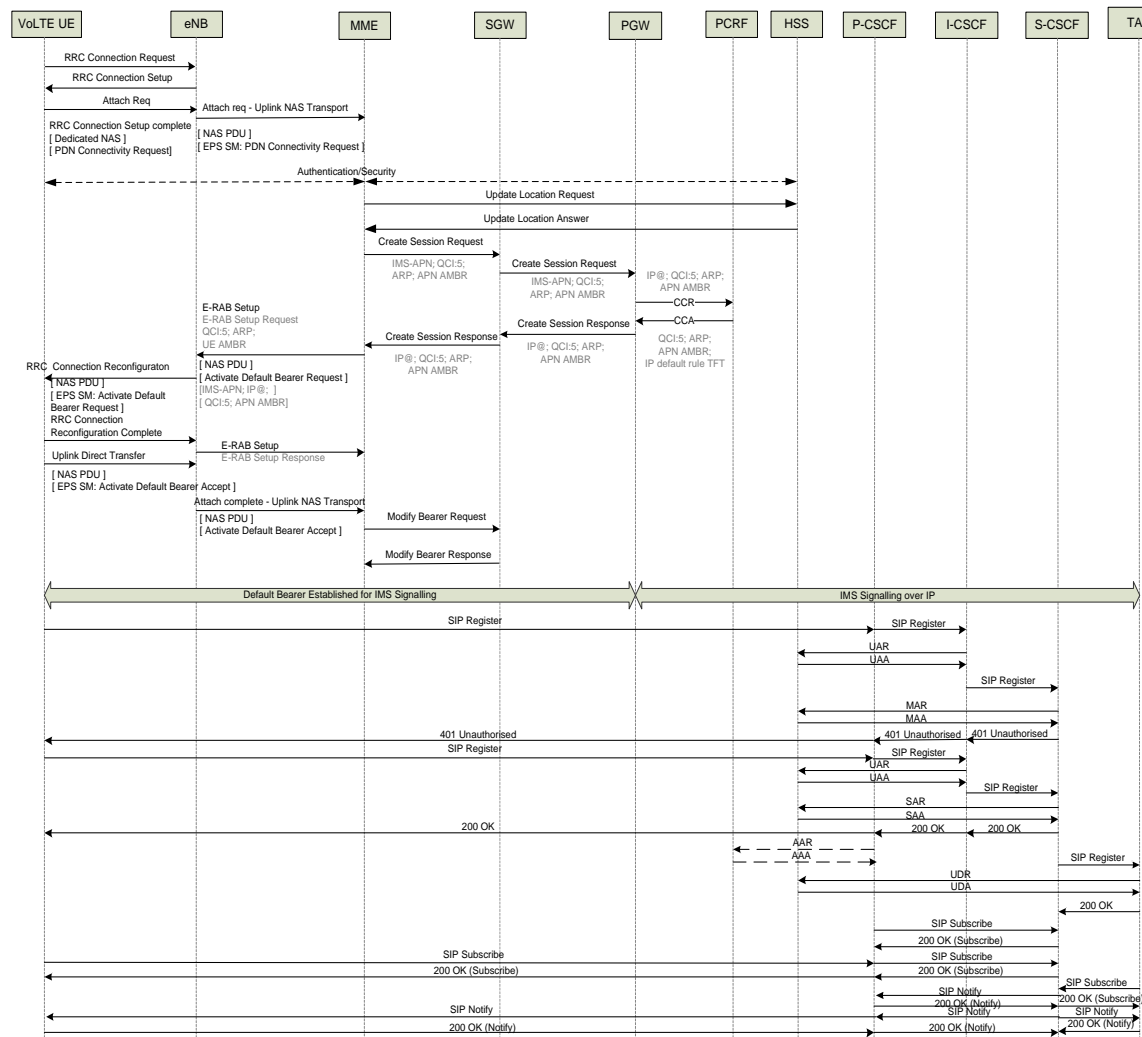The information contain herein is in full compliance with the GSM Association's antitrust compliance policy.

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Figure 3: VoLTE UE Attachment and IMS Registration message sequence

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The I-CSCF uses the User Authorization Request message to retrieve the S-CSCF name stored within the HSS, and forwards the request to the relevant S-CSCF.

The S-CSCF checks whether the RES received in the SIP REGISTER and the XRES previously stored match. The S-CSCF then performs the Server Assignment Request procedure to the HSS to download the relevant user profile and register the VoLTE UE. The S-CSCF stores the route header of the P-CSCF and binds this to the contact address of the VoLTE UE, this is used for routing to the VoLTE UE in future messages. Parameters of the P-Charging-Vector header are stored, and the S-CSCF sends a 200 OK response to the I-CSCF, including the user's display name (retrieved from the user profile in the HSS) within the P-Associated-URI, which forwards the message to the P-CSCF.

On receipt of the 200 OK from the I-CSCF, the P-CSCF changes the temporary set of security associations to a newly established set of security associations. It protects the 200 OK with these associations and sends the 200 OK to the VoLTE UE. All future messages sent to the UE will be protected using the security associations.

Optionally, the P-CSCF sends an AAR message to the PCRF to perform application binding to the default bearer (i.e. the P-CSCF is requesting to be informed in the event of the default bearer being lost/disconnected in order to trigger an IMS de-registration). The PCRF performs the binding and responds with a AAA message to the P-CSCF. Note that if this message is not sent, then IMS relies on other mechanisms to detect loss of the underlying default bearer, i.e., loss of connectivity (e.g. timeouts on trying to signal to the UE for an incoming call or the UE registers in the IMS with a new IP address).

On receipt of the 200 OK, the UE changes the temporary security association to a newly established set of security associations that will be used for further messages to the P-CSCF.

The VoLTE UE is now registered with the IMS network for VoLTE services, with SIP signalling being transported over the default EPC bearer.

The S-CSCF sends a third party SIP REGISTER to the VoLTE AS, as configured in the initial filter criteria (iFC) within the subscriber profile. The TAS may use the User Data Request procedure to read VoLTE data stored in the HSS.

The VoLTE UE, P-CSCF and TAS shall subscriber to the registration event package using the SIP SUBSCRIBE message, in order to be notified on any change of registration state for the public user identity. In turn, the S-CSCF shall send a SIP NOTIFY to the subscribing entities informing them of the active registration status.

V1.0